



(43) International Publication Date  
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number  
**WO 2004/028392 A3**

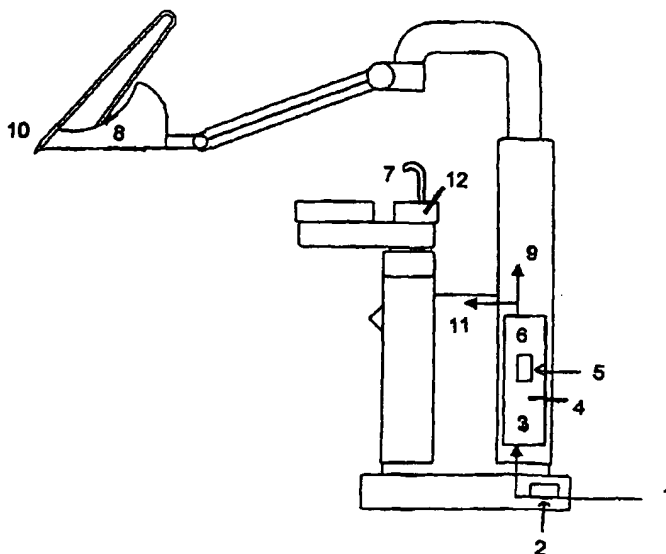
- (51) International Patent Classification<sup>7</sup>: **A61C 1/00**
- (21) International Application Number:  
PCT/EP2003/010728
- (22) International Filing Date:  
26 September 2003 (26.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
02256747.3 27 September 2002 (27.09.2002) EP
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: DENTAL INSTRUMENT CLEANSING APPARATUS



(57) Abstract: A dental unit water line (DUWL) monitoring and maintenance apparatus, for monitoring a DUWL. The apparatus comprises cleansing means attached to the DUWL for cleansing the fluid passing therethrough. Control means controls the cleansing means associated with the water line. Monitoring means monitors the operation of the dental unit by a dentist in use and storing data related to that operation. A timer times and records data relating to both periods of dental unit activity and inactivity, wherein, in use, the control means operates to receive data from the monitoring means and the timer and, based upon that data and reference data controls the operation of the water line to control flow of fluid through that DUWL and controls the cleanser to control the overall cleansing procedures associated with both the dental unit and associated DUWL.

## INTERNATIONAL SEARCH REPORT

Rec'd PCT/PTO 24 MAR 2005

International Application No

PCT/E/10728

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61C1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96/29098 A (DISEL) 26 September 1996 (1996-09-26) the whole document	1
A	US 5 709 546 A (WAGGONER) 20 January 1998 (1998-01-20) claim 1	1
A	EP 0 233 847 A (CASTELLINI) 26 August 1987 (1987-08-26) claims 7,8,10	1

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

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- "8" document member of the same patent family

Date of the actual completion of the international search

21 April 2004

Date of mailing of the international search report

28/04/2004

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP/01/10728

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9629098	A	26-09-1996	WO	9629098 A1	26-09-1996
US 5709546	A	20-01-1998	CA	2272722 A1	04-06-1998
			WO	9823218 A1	04-06-1998
EP 0233847	A	26-08-1987	IT	1189929 B	10-02-1988
			DE	3635568 A1	27-08-1987
			EP	0233847 A2	26-08-1987
			JP	62197050 A	31-08-1987